

FORM PTO-1390  
(REV 12-29-99)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

**TRANSMITTAL LETTER TO THE UNITED STATES  
DESIGNATED/ELECTED OFFICE (DO/EO/US)  
CONCERNING A FILING UNDER 35 U.S.C. 371**

102055-0049

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

**09/701062**INTERNATIONAL APPLICATION NO.  
PCT/AU99/00382INTERNATIONAL FILING DATE  
20 May 1999PRIORITY DATE CLAIMED  
20 May 1998

TITLE OF INVENTION

**CABLE CONNECTION DEVICE AND METHOD**

APPLICANT(S) FOR DO/EO/US

**MATHIESON, Brian, Douglas and MATHIESON, Eian, Douglas**

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☐ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
  - a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☐ has been transmitted by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
  - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☐ have been transmitted by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☐ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A **FIRST** preliminary amendment.  
☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information:

-Form PCT/IB/301  
 -Form PCT/IB/304  
 -Form PCT/IB/308  
 -Form PCT/IB/332  
 -International Preliminary Examination Report

U.S. APPLICATION NO. <b>09/701062</b> INTERNATIONAL APPLICATION NO. <b>PCT/AU99/00382</b>		ATTORNEY'S DOCKET NUMBER <b>102055-0049</b>					
17. <input checked="" type="checkbox"/> The following fees are submitted: <b>BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :</b> Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO ..... \$970.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO ..... \$840.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... \$690.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) ..... \$670.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) ..... \$96.00 <b>ENTER APPROPRIATE BASIC FEE AMOUNT =</b>		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">CALCULATIONS</th> <th style="text-align: left;">PTO USE ONLY</th> </tr> <tr> <td style="height: 100px; vertical-align: bottom;"> <b>\$ 970.00</b> </td> <td></td> </tr> </table>		CALCULATIONS	PTO USE ONLY	<b>\$ 970.00</b>	
CALCULATIONS	PTO USE ONLY						
<b>\$ 970.00</b>							
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"></td> <td style="width: 50%; text-align: right;">\$</td> </tr> </table>			\$		
	\$						
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE				
Total claims	25 - 20 =	5	X \$18.00				
Independent claims	- 3 =		X \$78.00				
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$260.00				
<b>TOTAL OF ABOVE CALCULATIONS =</b>			<b>\$ 1060.00</b>				
Reduction of 1/2 for filing by small entity, if applicable. A Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28).			\$ 0				
<b>SUBTOTAL =</b>			<b>\$ 1060.00</b>				
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).			\$ +				
<b>TOTAL NATIONAL FEE =</b>			<b>\$ 1060.00</b>				
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property			\$ +				
<b>TOTAL FEES ENCLOSED =</b>			<b>\$ 1,060.00</b>				
Amount to be refunded:			\$				
charged:			\$				

a. ☒ A check in the amount of \$ 1060.00 to cover the above fees is enclosed.


b. ☐ Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ to cover the above fees.  
 A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any  
 overpayment to Deposit Account No. 03-1234. A duplicate copy of this sheet is enclosed.

**NOTE:** Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

**John F. McKenna**  
**Cesari and McKenna**  
**88 Black Falcon Avenue**  
**Boston, MA 02210**  
**(617) 951-2500**

  
 SIGNATURE:  
**Patricia A. Sheehan**  
 NAME  
**32,301**  
 REGISTRATION NUMBER

09/701062

PATENTS  
102055-0049

534 Rec'd PCT/PTO 20 NOV 2000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re The Application of:	)	
Brian Douglas Mathieson et al.	)	Serial No.: Not yet assigned
	)	
International Application No.:	)	
PCT/AU99/00382	)	Examiner: Not yet assigned
	)	
International Filing Date:	)	
20 May 1999	)	Art Unit: Not yet assigned
	)	
For: CABLE CONNECTION DE-	)	Filed: November 20, 2000
VICE AND METHOD	)	

Cesari and McKenna, LLP  
88 Black Falcon Avenue  
Boston, MA 02210  
November 20, 2000

"Express Mail" Mailing-Label Number: EI705759738US

Honorable Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

**PRELIMINARY AMENDMENT**

**In the Claims:**

Cancel Claims 1-19 and insert new claims as follows:

20. A device to facilitate electrical connections to a cable, wire or the like,  
said device including:

a housing having a hinged or otherwise movable covering; and,  
at least one conductive spike provided substantially within said housing;  
such that, in use, a portion of said cable or wire is positioned proximal to  
said at least one spike and said movable covering is closed to substantially sur-  
round said portion of said cable or wire, whereby said at least one spike is re-  
tained in electrical connection with said cable or wire.

21. A device as claimed in claim 20, wherein when said movable covering is  
closed said at least one spike pierces an insulative sheath around the cable, wire or  
the like and contacts the wire or cable.

22. A device as claimed in claim 20, wherein said housing has retaining means  
associated therewith to permanently or removably retain said housing in a closed  
position about the cable or wire.

23. A device as claimed in claim 22, wherein said retaining means includes  
locking pins and locking pin receptors.

24. A device as claimed in claim 23, wherein said housing further includes sup-  
port means to urge said cable or wire in a direction towards said at least one spike.

25. A device as claimed in claim 24, wherein said support means includes biased  
projecting members.

26. A device as claimed in claim 25, wherein said projecting members are inte-  
grally formed with said casing and are adapted to project in a substantially trans-  
verse direction to the axial direction of said cable.

27. A device as claimed in claim 26, wherein said projecting members have  
shaped ends adapted to at least partially surround said cable or wire.

28. A device as claimed in claim 25, wherein two or more sets of projecting members are provided for retention of cables of varying diameter in said housing, each set of projecting members including at least one member of different length.
29. A device as claimed in claim 20, wherein said movable covering is embodied in the form of a hinged wing.
30. A device as claimed in claim 20, wherein two or more housings are provided, each for connection of a respective wire or cable.
31. A device as claimed in claim 20, wherein said device further includes an electrical circuit to be connected to said cable.
32. A device as claimed in claim 20, wherein said housing is formed of insulative, such as plastics, material.
33. A device as claimed in claim 21, wherein said housing further includes support means to urge said cable or wire in a direction towards said at least one spike.
34. A device as claimed in claim 33, wherein said support means include biased projecting members.
35. A device as claimed in claim 34, wherein said projecting members are integrally formed with said casing and are adapted to project in a substantially transverse direction to the axial direction of said cable.
36. A device as claimed in claim 35, wherein said projecting members have shaped ends adapted to at least partially surround said cable or wire.

37. A device as claimed in claim 36, wherein said housing has retaining means associated therewith to permanently or removably retain said housing in a closed position about the cable or wire.

38. A device to facilitate electrical connection to a plurality of cables, wires or the like, said device including:

- a housing having a plurality of hinged or otherwise movable coverings;
- at least one conductive spike associated with each movable covering said spikes provided substantially within said housing; and

- in use, a portion of a given cable or wire is positioned proximal to a given spike and each movable covering is closed to substantially surround the respective portion of cable or wire, whereby each spike is retained in electrical connection with the respective cable or wire.

39. A device as claimed in claim 38, further including an electrical circuit for connection to each of said plurality of cables.

40. A device to facilitate electrical connection to a pair of cables, wires or the like, said device including:

- a housing having a pair of hinged wing members, each member adapted to be closed about a respective cable or wire in a permanent or removable manner; and,

- at least one conductive spike associated with each member;

- such that, in use, a portion of a given cable or wire is positioned proximal to a given at least one said spike associated with a respective housing, and each hinged wing member is closed to surround said respective portion of cable, whereby said given at least one spike is retained in electrical connection with said cable or wire.

41. A device as claimed in claim 40, wherein said housing further includes an electrical circuit for connection to each of said cables or wires.
42. A method of facilitating electrical connection to at least one cable, wire or the like, the method including the steps of:
- A. positioning a portion of the cable or wire proximal to at least one spike located in a housing;
  - B. closing the housing by positioning a moveable cover to surround the portion of the cable or wire and thereby urge the spike into electrical connection with the cable or wire;
  - C. retaining the housing in the closed position to maintain the spike in electrical contact with the cable or wire.

43. The method of claim 42 further including, in the step of closing the moveable cover, piercing insulation surrounding the portion of the cable or wire with the at least one spike.

44. The method of claim 42 further including the steps of

D. positioning respective portions of one or more additional cables or wires proximal to additional spikes located in the housing and associated respectively with additional moveable covers;

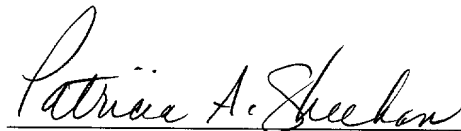
E. positioning the additional moveable covers to surround the portions of the additional cables or wires and thereby urge the additional spikes into electrical connection with the respective additional cables or wires; and

F. retaining the covers in positions that maintain the additional spikes in electrical contact with the respective additional cable or wires.

**REMARKS**

Please charge any fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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PATENT  
102055-0049

09/701062

534 Rec'd PCT/PTG 20 NOV 2000

**UNITED STATES PATENT APPLICATION**

*of*

**Brian Douglas Mathieson**

*and*

**Eian Douglas Mathieson**

*for a*

**CABLE CONNECTION DEVICE AND METHOD**

09701062-122604

## **Cable Connection Device And Method**

### **Background Of The Invention**

The present invention relates to a device with the capability of allowing electronic circuits to  
5 be easily fitted to pre-existing electrical cables. The device utilises a method of facilitating  
good electrical and mechanical contact with electrical cables, without any need for alteration  
of the electrical cables, and for retention of the cables in position. In particular, the present  
invention relates to such a device which is quickly and easily snap-fitted to the cable(s).

### **10 Description Of The Prior Art**

In the field of automotive power electronics, devices for monitoring and control of electrical  
characteristics, such as voltage levels, of the power circuitry are presently provided pre-  
attached to the electronic cabling to be used in the automotive application.

15 For example, charging leads for charging or obtaining charge from a power source are  
available with integrally formed electronic circuitry having the function of preventing surges  
in electronic variables, such as voltage fluctuations, which can occur when current passes  
from a voltage source. This can occur in situations such as using charging cables to charge  
the battery of a motor vehicle.

20

Certain electronic variable monitoring, such as current, voltage and power signals and levels,  
is presently available as a transportable diagnostic device for pre-existing cabling. These  
devices usually comprise a sharp metallic point which when pushed through cable insulation  
provides electrical contact with the conducting core of the electrical cable. These devices  
25 offer no permanent electronic monitoring, control or protection capabilities, but rather serve  
as a 'trouble-shooting' diagnostic.

This identifies a need for a device that may be used to easily attach an arbitrary electronic  
circuit to a wide range of pre-existing cables, either permanently or temporarily.

30

### Summary Of The Invention

The present invention seeks to provide a casing for an electronic circuit such that the casing assists in making stable electrical contact between the electronic circuitry integrally formed within the casing and the electrical cables to be monitored or controlled.

5

The present invention seeks to provide a casing for housing an electronic circuit, said casing characterised in that it includes at least one cable connection means to secure said casing to a cable. Preferably said cable connection means is formed by a hinged wing adapted to close substantially about said cable. Also preferably said cable connection means includes at least one conductive spike adapted to pierce the insulative sheath of said cable. In use, when said cable is positioned within said cable connection means and said hinged wing is closed therearound, said insulative sheath of said cable is pierced by said conductive spike(s) to facilitate an electrical connection between said cable and said electronic circuit.

10 In one broad form the present invention provides a device to facilitate electrical connections to a cable, wire or the like, said device including:

a housing having a hinged or otherwise movable covering; and,

at least one conductive spike provided substantially within said housing;

such that, in use, a portion of said cable or wire is positioned proximal to said spike(s)

20 and said movable covering is closed to substantially surround said portion of said cable or wire, whereby said spike(s) is/are retained in electrical connection with said cable or wire.

Preferably, said cable, wire or the like includes an insulative sheath therearound whereby, in use, said spike(s), pierce(s) said insulative sheath and contacts said wire or cable.

25

Also preferably, said housing has retaining means associated therewith to permanently or removably retain said housing in a closed position about said cable or wire.

In this preferred form, said retaining means includes locking pins and locking pin receptors.

30

- 3 -

Preferably, said housing further includes support means to urge said cable or wire in a direction towards said spike(s).

In this form, preferably, said support means includes biased projecting members.

5

Perhaps most preferably, said projecting members are integrally formed with said casing and are adapted to project in a substantially transverse direction to the axial direction of said cable.

10 In a preferred form, said projecting members have shaped ends adapted to at least partially surround said cable or wire.

Also preferably, the device is embodied, wherein two or more sets of projecting members are provided for retention of cables of varying diameter in said housing, each set of projecting  
15 members including at least one member of different length.

In a most preferred form, said movable member is embodied in the form of a hinged wing.

Most preferably, two or more housings are provided, each for connection of a respective wire  
20 or cable.

In a preferred embodiment, said device further includes an electrical circuit to be connected to said cable(s).

25 In a most preferred form, said housing(s) are formed of insulative, such as plastics, material.

In a further broad form, the present invention provides a device to facilitate electrical connection to a plurality of cables, wires or the like, said device including:

- a housing having a plurality of hinged or otherwise movable coverings;
- 30 each having at least one conductive spike provided substantially within said housing;
- such that, in use, a portion of one cable or wire is positioned proximal to a spike and

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each movable covering is closed to substantially surround its respective portion of cable or wire, whereby each spike is retained in electrical connection with its respective cable or wire.

5 In this preferred form, the device preferably further includes an electrical circuit for connection to each of said plurality of cables.

In yet still a further broad form, the present invention provides a device to facilitate electrical connection to a pair of cables, wires or the like, said device including:

10 a housing having a pair of hinged wing members, each adapted to be closed about a respective cable or wire in a permanent or removable manner; and,

at least one conductive spike associated in each housing;

such that, in use, a portion of a cable or wire is positioned proximal to said spike(s) associated with a respective housing, and each hinged wing member is closed to surround said  
15 respective portion of cable, whereby said spike(s) is/are retained in electrical connection with said cable or wire.

In this form, preferably, said housing further includes an electrical circuit for connection to each of said cables or wires.

20

#### **Brief Description Of The Drawings**

The present invention will become more fully understood from the following detailed description of a preferred but non-limiting embodiment thereof, described in connection with the accompanying drawings, wherein:

25 Fig. 1 illustrates various views of a preferred embodiment of the present invention, and shows the lower half of the device;

Fig. 2 illustrates various views of a preferred embodiment of the present invention, and shows the upper half of the device;

Fig. 3 illustrates a preferred embodiment of the present invention, and shows an  
30 sectional view of the assembled device; and,

Fig. 4 illustrates end views of the assembled device.

### Detailed Description Of A Preferred Embodiment

Throughout the drawings, like numerals will be used to identify similar features, except where expressly otherwise indicated.

5

A preferred embodiment of the present invention is shown in Figs. 1, 2 and 3. In this embodiment the present invention provides a moulded plastic casing 1 which houses a printed circuit board 9 together with appropriate electronic components. For example, the casing 1 may house the voltage monitoring and control electronic circuit disclosed in the Applicant's Australian Patent No. 620091.

Fig. 1 shows the lower half of the casing 1. Fig. 1(a) showing an elevational view, Fig. 1(b) showing a plan view, Fig. 1(c) showing a bottom view, and, Fig. 1(d) showing an end elevational view of a 'wing' of the device. The upper half 6 of the casing 1 is presented in Fig. 2, with Fig. 2(a) showing a side elevational view, Fig. 2(b) showing a top view, Fig. 2(c) showing a plan view and Fig. 2(d) showing a front elevational view. Connecting these halves together forms the device, shown in sectional view in Fig. 3, and as illustrated in Fig. 4, Fig. 4(a) showing a side elevational view with the 'wings' open and Fig. 4(b) showing a side elevational view with the 'wings' closed.

20

Each 'wing' 11 of the casing pivots along the hinge means 12 such that when the wing 11 is closed, as per the position illustrated in Fig. 3, an electrical cable or wire may be permanently or removably clamped therein.

25 Locking pins 4 in conjunction with the locking pin receptors 7 embody the retaining means to fix the flexible wings 11 into place so as the device remains clamped to an electrical cable. Underneath the locking pin receptors are provided a support means, embodied as tapered webs which provide mechanical support for the locking pin receptors and also help guide the electronic cable into a central position over the electronic connector spikes 10, ensuring they  
30 make and maintain good contact with the conductive core of the electrical cabling when the wings 11 are closed.

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The protrusions or biased projection means 2 and 3 embody the 'support means' for mechanical clamping of the device to electrical cable. These protrusions extend from the surface of the casing and physically push the cable onto the spiked electrical contacts 10 of the electronic circuit board 9. The protrusions 2 are typically for use in clamping cables of less than, say 12 mm, outer diameter, whilst the protrusions 3 aid in clamping cables with an outer diameter of greater than, say 4 mm. For small outer diameter cables, grommets may be supplied into the arches 5 and help hold the cables in position.

10 The protrusions 3, of which four are present in this embodiment, are preferably manufactured to bend at their base so as to provide a clamping force due to relaxing of the distorted moulded plastic. Bending of the protrusions 3 also allows the protrusions 2 to clamp larger outer diameter cables.

15 An orifice 8 in the upper half of the device allows viewing of an LED located on the electronic circuit board that may typically indicates the status of certain electronic variables. Obviously, the casing may be varied to contain other circuits and show other displays.

It will be understood that, whilst a very specific embodiment has been described, numerous other variations and modifications of the invention will become apparent to persons skilled in the art. All such variations and modifications should be considered to fall within the scope of the invention as broadly hereinbefore described and as hereinafter claimed.

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## THE CLAIMS

1. A device to facilitate electrical connections to a cable, wire or the like, said device including:

a housing having a hinged or otherwise movable covering; and,

5 at least one conductive spike provided substantially within said housing;

such that, in use, a portion of said cable or wire is positioned proximal to said spike(s) and said movable covering is closed to substantially surround said portion of said cable or wire, whereby said spike(s) is/are retained in electrical connection with said cable or wire.

10 2. A device as claimed in claim 1, wherein said cable, wire or the like includes an insulative sheath therearound whereby, in use, said spike(s), pierce(s) said insulative sheath and contacts said wire or cable.

3. A device as claimed in claim 1 or 2, wherein said housing has retaining means  
15 associated therewith to permanently or removably retain said housing in a closed position about said cable or wire.

4. A device as claimed in claim 3, wherein said retaining means includes locking pins and locking pin receptors.

20

5. A device as claimed in any one of claims 1 to 4, wherein said housing further includes support means to urge said cable or wire in a direction towards said spike(s).

6. A device as claimed in claim 5, wherein said support means includes biased projecting  
25 members.

7. A device as claimed in claim 6, wherein said projecting members are integrally formed with said casing and are adapted to project in a substantially transverse direction to the axial direction of said cable.

30

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8. A device as claimed in claims 6 or 7, wherein said projecting members have shaped ends adapted to at least partially surround said cable or wire.

9. A device as claimed in any one of claims 6 to 8, wherein two or more sets of projecting members are provided for retention of cables of varying diameter in said housing, each set of projecting members including at least one member of different length.

10. A device as claimed in any one of claims 1 to 9, wherein said movable member is embodied in the form of a hinged wing.

10

11. A device as claimed in any one of claims 1 to 10, wherein two or more housings are provided, each for connection of a respective wire or cable.

12. A device as claimed in any of claims 1 to 11, wherein said device further includes an electrical circuit to be connected to said cable(s).

13. A device as claimed in any one of claims 1 to 12, wherein said housing(s) are formed of insulative, such as plastics, material.

14. A device to facilitate electrical connection to a plurality of cables, wires or the like, said device including:

a housing having a plurality of hinged or otherwise movable coverings;

each having at least one conductive spike provided substantially within said housing;

such that, in use, a portion of one cable or wire is positioned proximal to a spike and

each movable covering is closed to substantially surround it's respective portion of cable or wire, whereby each spike is retained in electrical connection with its' respective cable or wire.

15. A device as claimed in claim 14, further including an electrical circuit for connection to each of said plurality of cables.

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16. A device to facilitate electrical connection to a pair of cables, wires or the like, said device including:

a housing having a pair of hinged wing members, each adapted to be closed about a respective cable or wire in a permanent or removable manner; and,

5 at least one conductive spike associated in each housing;

such that, in use, a portion of a cable or wire is positioned proximal to said spike(s) associated with a respective housing, and each hinged wing member is closed to surround said respective portion of cable, whereby said spike(s) is/are retained in electrical connection with said cable or wire.

10

17. A device as claimed in claim 16, wherein said housing further includes an electrical circuit for connection to each of said cables or wires.

18. A device, substantially as herein described with reference to the accompanying  
15 drawings.

19. A method of facilitating electrical connection to at least one cable, wire, or the like substantially as herein described.

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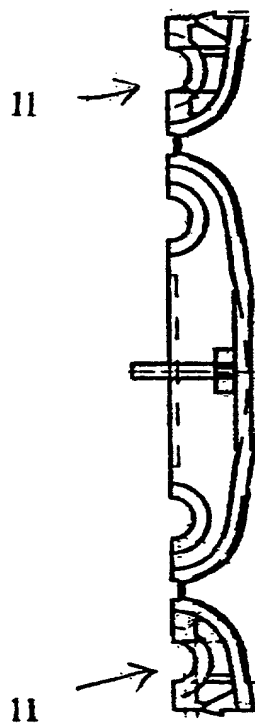


FIG. 1(a)

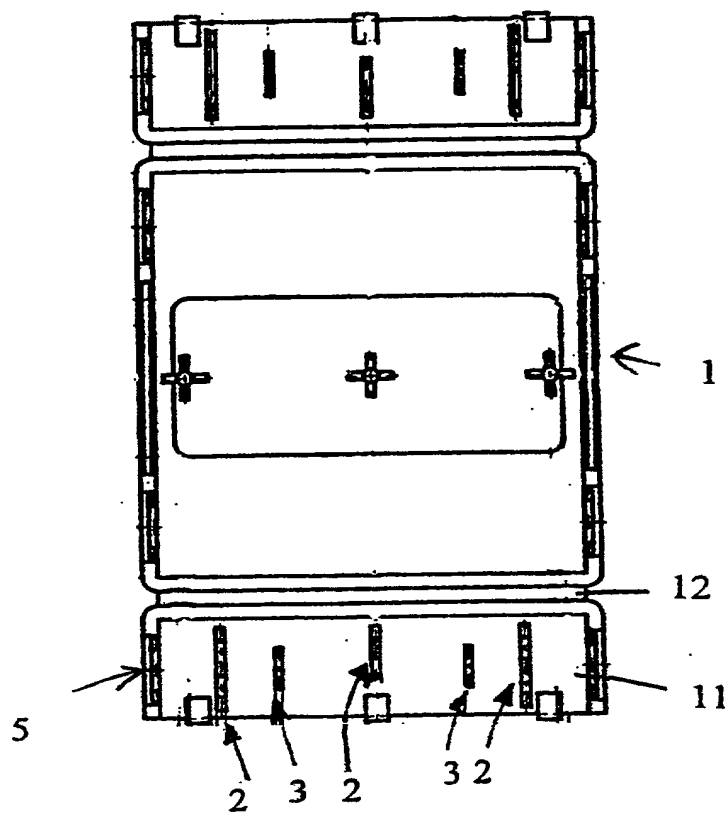


FIG. 1(b)

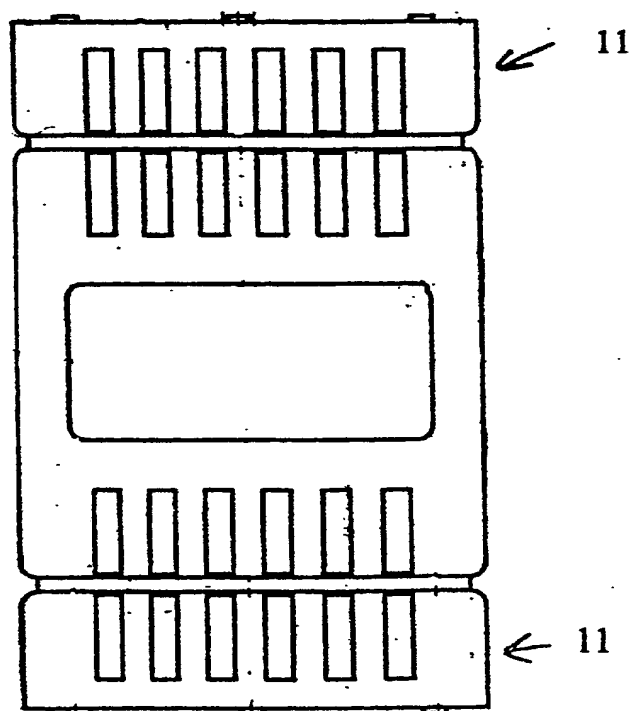


FIG. 1(c)



FIG. 1(d)

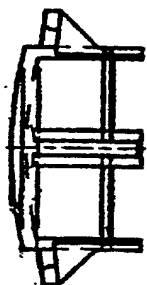


FIG. 2(a)

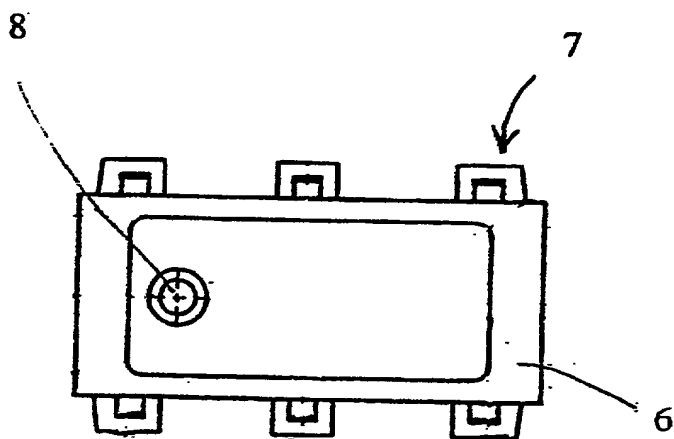


FIG. 2(b)

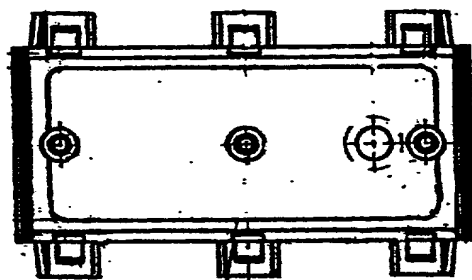


FIG. 2(c)

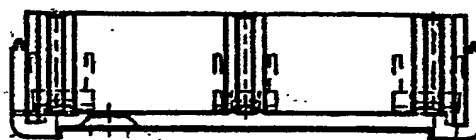


FIG. 2(d)

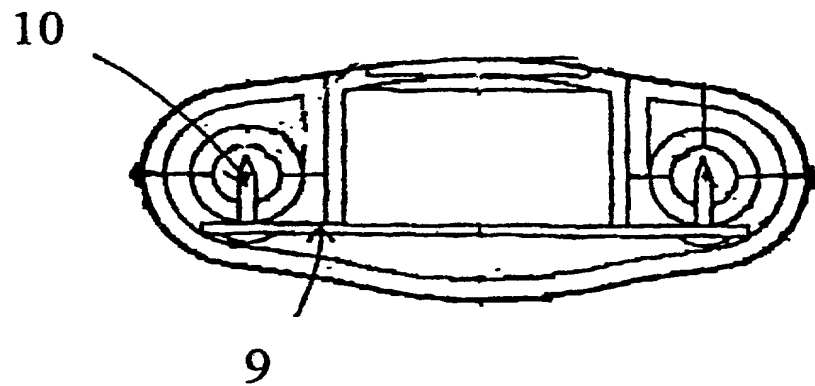


FIG. 3

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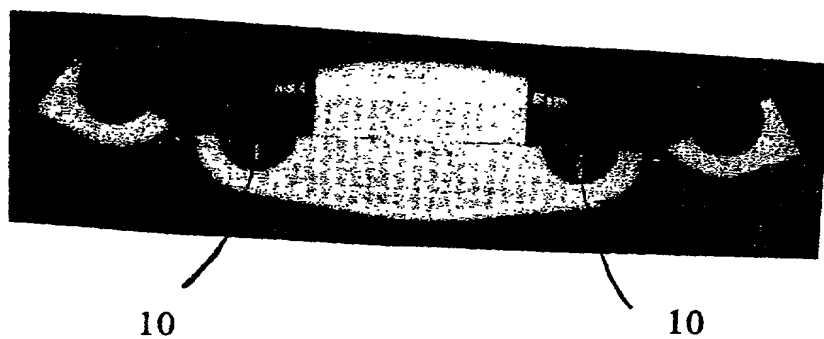


FIG. 4(b)

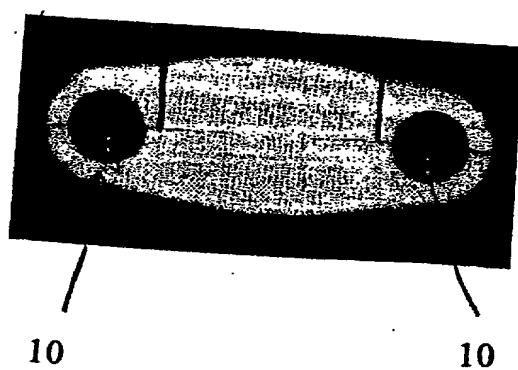
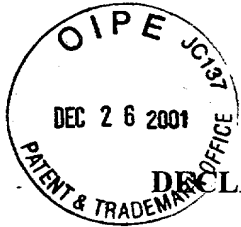


FIG. 4(a)

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DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below-named inventor, I hereby declare that:

My residence, post-office address, and citizenship are as stated below next to my name.

I believe I am an original, first, and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled CABLE CONNECTION DEVICE AND METHOD, the specification of which was filed on November 20, 2000, and accorded Serial Number 09/701,062 .

I hereby state that I have reviewed and understand the contents of the above-identified application specification, including the claims, as amended by any amendment specifically referred to herein.

I acknowledge the duty to disclose all information known to me that is material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code §119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate filed by me on the same subject matter having a filing date before that of the application on which priority is claimed:

Australian patent application PCT/AU99/00382, filed 20  
May 1999.

I hereby claim the benefit under Title 35, United States Code §119(e) of the following U.S. provisional application:

None

I hereby claim the benefit under Title 35, United States Code §120, of the United States Application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United State Code, §112, I acknowledge the duty to disclose all information that is material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56, and which became available to me between the filing date of the prior application and the national or PCT international filing date of this application:

None

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further

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that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint Michael E. Attaya, Reg. No. 31,731; Charles J. Barbas, Reg. No. 32,959; Joseph H. Born, Reg. No. 28,283; John L. Capone, Reg. No. 41,656; Robert A. Cesari, Reg. No. 18,381; Brian C. Dauphin, Reg. No. 40,983; Howard S. Fuhrman, Reg. No. 33,175; Christopher K. Gagne, Reg. No. 36,142; A. Sidney Johnston, Reg. No. 29,548; William A. Loginov, Reg. No. 34,863; John F. McKenna, Reg. No. 20,912; Rama B. Nath, Reg. No. 27,072; Martin J. O'Donnell, Reg. No. 24,204; Thomas C. O'Konski, Reg. No. 26,320; Edwin H. Paul, Reg. No. 31,405; Michael R. Reinemann, Reg. No. 38,280; Rita M. Rooney, Reg. No. 30,585; Heather B. Shapiro, Reg. No. 41,305; Patricia A. Sheehan, Reg. No. 32,301; and Joseph Stecewycz, Reg. No. 34,442, Cesari and McKenna, LLP, 88 Black Falcon Avenue, Boston, Mass. 02210, jointly, and each of them severally, my attorneys and attorney, with full power of substitution, delegation and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent and to transact all business in the Patent and Trademark Office connected therewith. Please direct all telephone calls to Patricia A. Sheehan at (617) 951-2500. Please address all correspondence to Patricia A. Sheehan.

  
Brian Douglas Mathieson

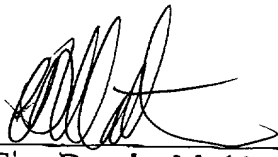
5/12/00  
Date

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Citizenship Australian

Post Office Address: Same as above



  
Eian Douglas Mathieson

5/12/00  
Date

Residence:

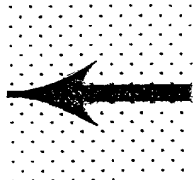
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~~St. Marys, NSW 2760~~ St. Ives, 2075.  
~~Australia~~ ~~AUX~~ Australia.

Citizenship

Australian

Post Office Address:

Same as above



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